

NESDIS RADARSAT SAR Computer System and Its Performance

William Tseng and Ralph Meiggs

NOAA/NESDIS, Washington, D.C. USA

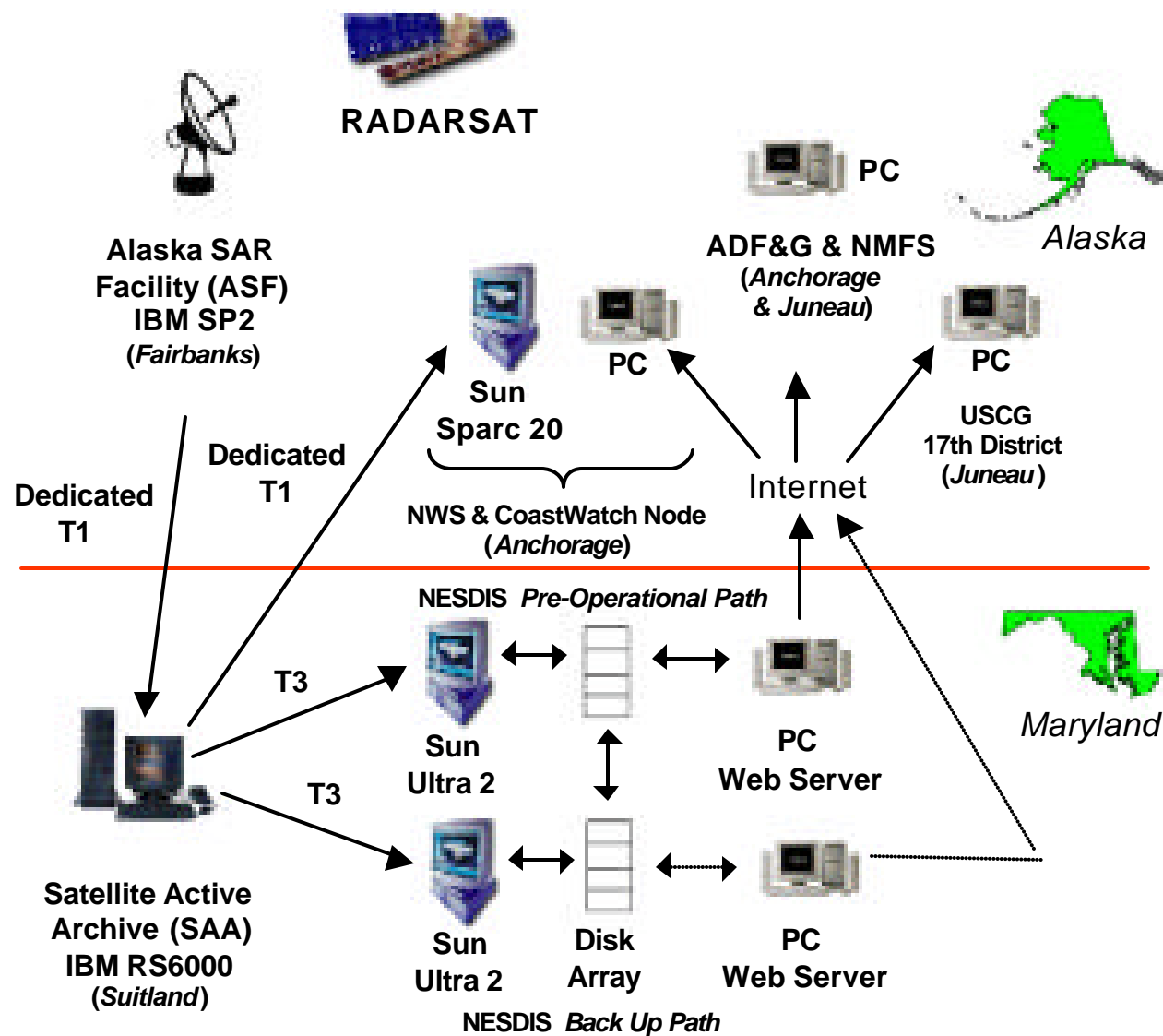
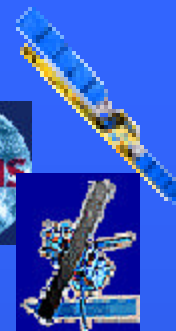
Tel.: 301-763-8142 x 124, or x137

Emails: William.Tseng@noaa.gov

Ralph.E.Meiggs@noaa.gov

NOAA

Alaska SAR Demo



DATA FLOW

Computer System

■ *Workstation: SUN Ultra 2*

- *Hard disk: 11.4 GB+107GB Hard Disk Array*
- *Speed: 200MHz*
- *Operating System: UNIX Solaris 3.1*
- *Software: IDL UNIX 3-User Node Locked License, ENVI PV-Wave, NSIPS, etc.*

■ *Two PC Servers: Gateway ALR 7200 Pentium III Servers*

- *Hard Disk Drive: 9GB+107GB for Each PC Server*
- *Memory: 512MB RAM*
- *Speed: 600 MHZ Dual Processors*
- *Software: MS SQL Server 7.0 with 5 Client Access License*
- *Operating System: MS Windows NT 4.0*

Web Address and Peripherals

■ Web Site:

<http://orbit35i.nesdis.noaa.gov/orad/sar/>

■ Peripherals

- *Hard Disk Array: PAT-QGB-HOTSWAP with 39 Bay Disk Enclosures. Each Disk Has 9GB.*
- *Quantum DLT 7000TS 35GB/70GB External DLT Drive*
- *CY-8905 8 MM Tape Subsystem*
- *Networking to Printers*



WIPE System and Products

- *WIPE System Developed by ACT*

- *SAR Products*

- *Wind Products by JHU/APL*
- *Wind Vector and Ship Detection Products by ERIM International*
- *SAR Imagery by ERIM International*

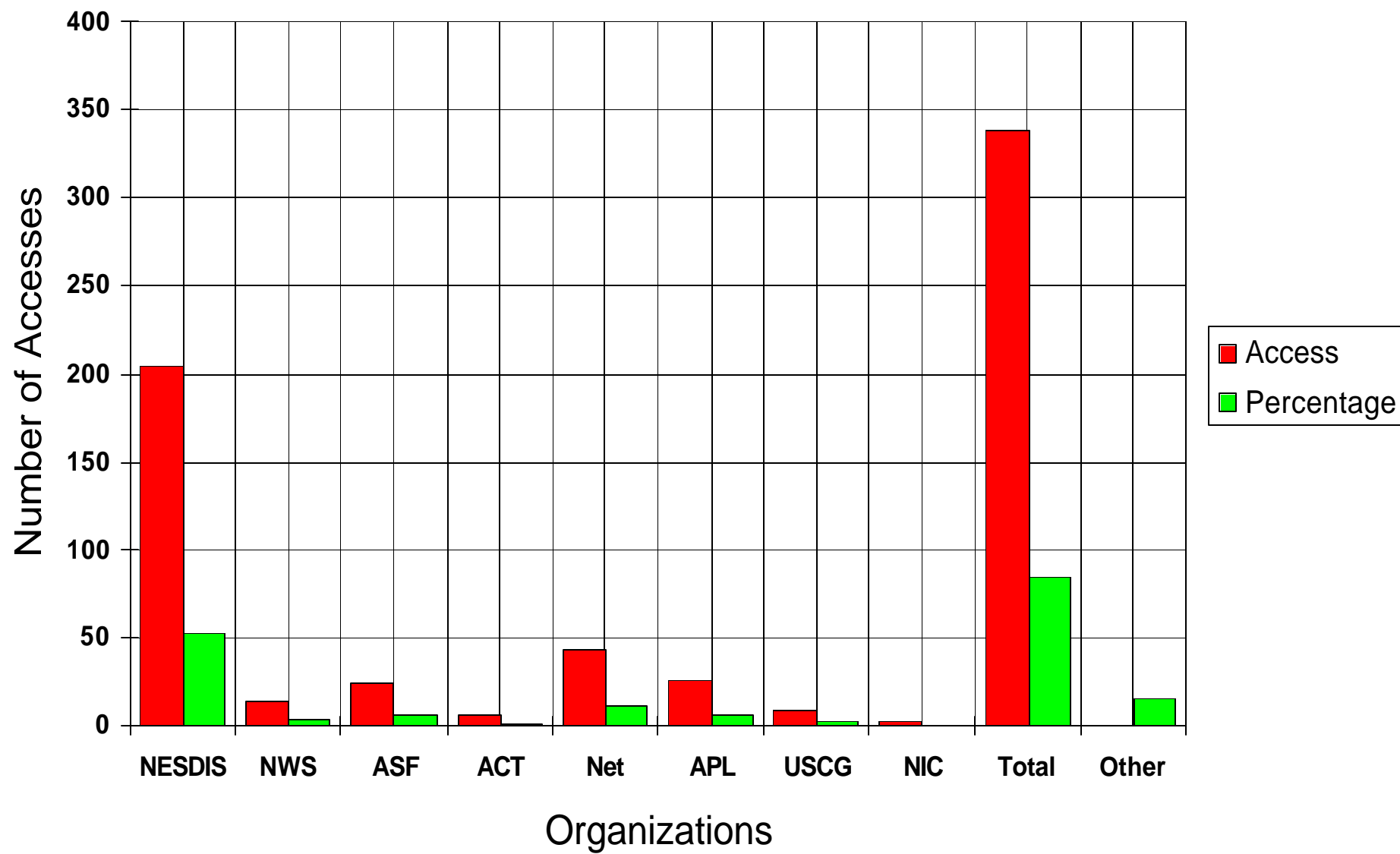
- *Ancillary Products*

- *SSM/I Wind Speed; 14 KM SST Analysis; ERS-2 Scatterometer; Buoy Observations, etc.*

Numbers of Access from 3/16/00 to 5/4/00 (48 Days)

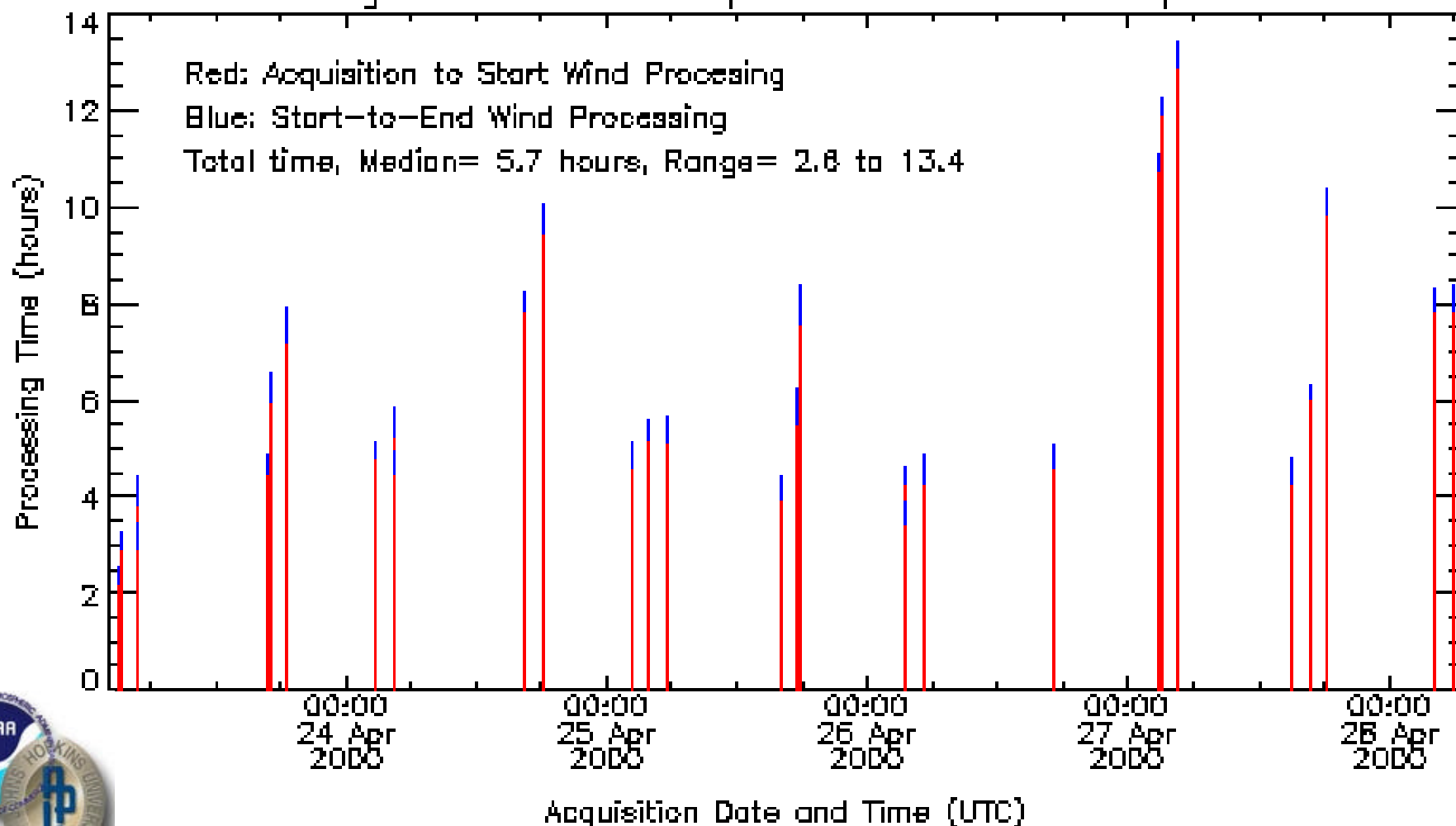
Organizations	Numbers of Access	Percentage, %
NESDIS	204.0000	52.5773
NWS	14.0000	3.6084
ASF	24.0000	6.1856
ACT	7.0000	1.8041
Net	43.0000	11.0825
APL	26.0000	6.7010
USCG	9.0000	0.5155
NIC	2.0000	0.5155
Total	339.0000	84.7940
Others		15.2060

Access from March 16 - May 4, 2000



Example of Processing Time

Processing Schedule: 2000 Apr 23 02:13 to 2000 Apr 28 06:51

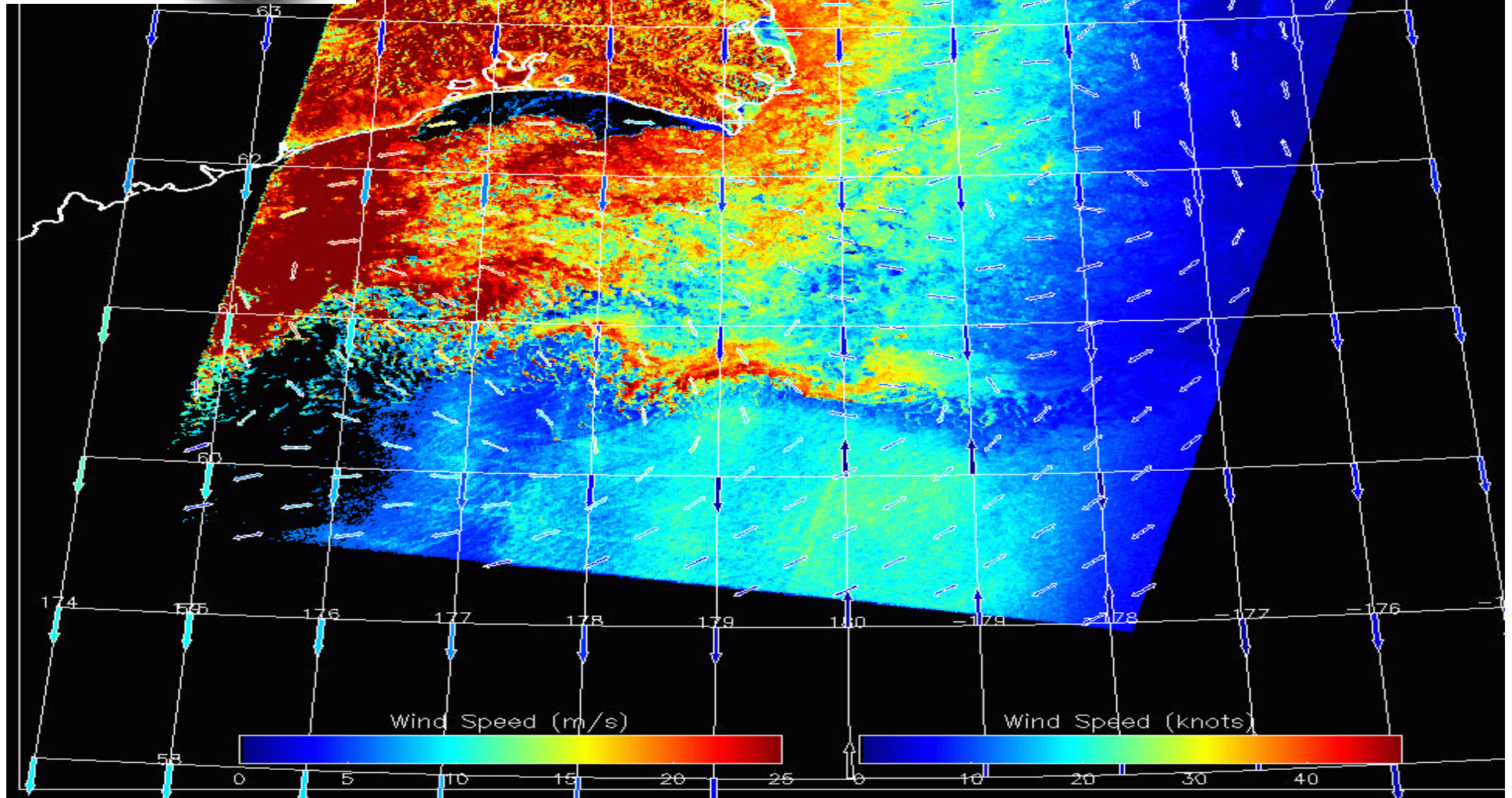


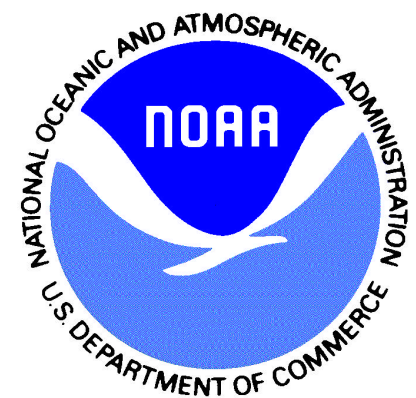
SAR Ocean Applications

- Some SAR ocean applications are, but not limited to:
 - *Detection of Ocean Surface Winds*
 - *Detection of Ship /Hard Target Locations*
 - *Tracking of Ocean Features (Upwelling, Currents, Boundaries, Eddies, Icebergs, etc.)*
 - *Detection of Natural Hazards and Man-Made Ocean Pollution (Algal Blooms, Oil Spills, Chemical Spills, etc.)*
 - *Studies of Surface and Internal Waves*

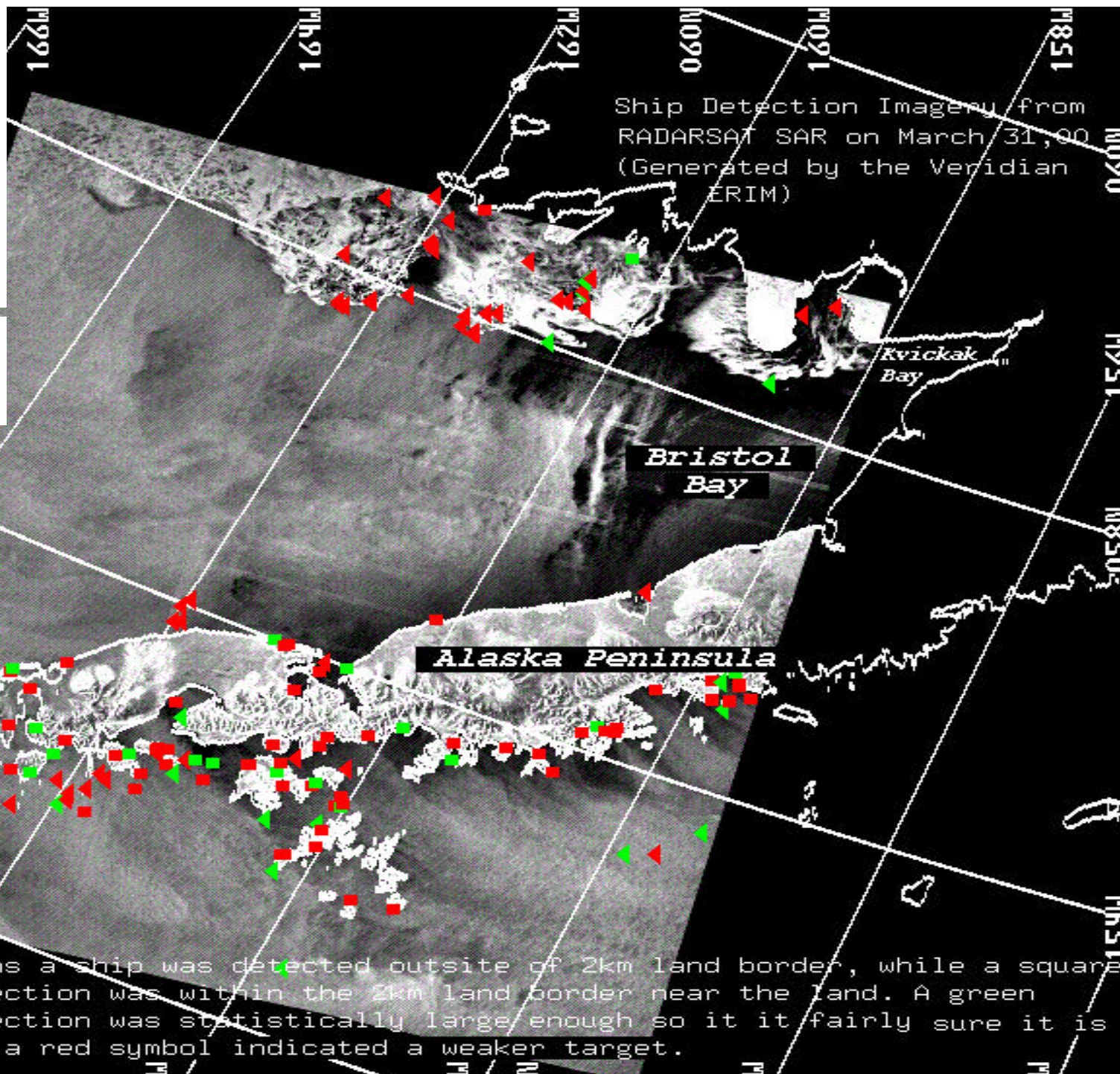


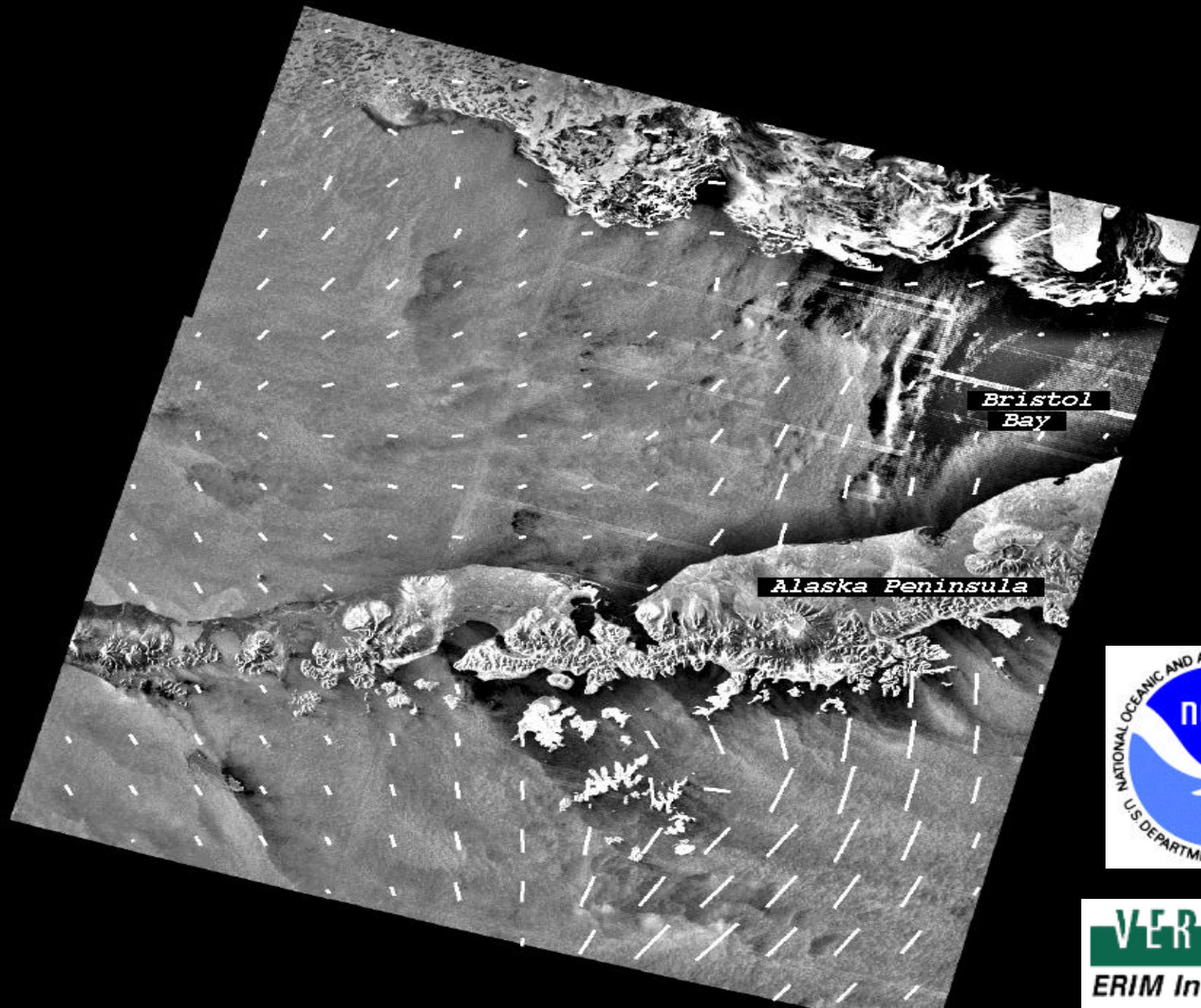
SAR Wind Speed Imagery off the Coast
of Russia on April 13, 2000
(generated by the JHU/APL)
Anadyrskij Zaliv





VERIDIAN
ERIM International





Any Problems?

- *Log in RADARSAT website at <http://orbit35i.nesdis.noaa.gov/orad/sar/> and comment in Feedback*
- *Overall Person in Charge: William Pichel at William.G.Pichel@noaa.gov, or Pablo Clemente-Colón at Pablo.Clemente-Colon@noaa.gov*
- *Pre-Operational Site in Charge: William Tseng at William.Tseng@noaa.gov or Ralph Meiggs at Ralph.E.Meiggs@noaa.gov*

Winds & Ship Detection Product Applications and Examples

■ *Winds Product from RADARSAT SAR*

- *Wind Algorithms*

■ *Ship Detection Products from RADARSAT SAR*

- *Ship Detection Algorithms*
- *Applications and Examples***